Chronic Low Back Pain
Chronic Neck Pain
Failed Back Surgery

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Disclosures

• Professional
  – BOD North American Spine Society
  – BOD American Academy Pain Medicine

• Financial
  – Personal
    • Nothing to disclose
  – Institutional
    • San Francisco Spine Institute fellowship support
Low Back and Neck Pain
Natural History and Prognosis
Acute LBP: Prognosis

Pengel L et al. BMJ 2003;327:323-8
Acute LBP: Prognosis

**BMJ RESEARCH**

Prognosis in patients with recent onset low back pain in Australian primary care: inception cohort study

Nicholas Henschke, postdoctoral fellow,1,2 Christopher G Maher, director of division,1,2 Kathryn M Refshauge, professor,2 Robert D Herbert, associate professor,1,2 Robert G Cumming, professor,3 Jane Bleasel, rheumatologist,4 John York, rheumatologist,4 Anurina Das, research officer,2 James H McAuley, research manager1,2

Henschke et al. BMJ on-line first 2008;1-7 (same Australian research group)
Acute LBP: natural history

• 973 pts; age 43; 55% men
• LBP < 2 weeks duration
• Follow-up: 6 wks, 3 months, 12 months
• Outcome criteria
  – Resolution pain
  – RTW
  – Impairment

Henschke et al. BMJ on-line first 2008;1-7
## Recovery (%)

<table>
<thead>
<tr>
<th></th>
<th>6 weeks</th>
<th>12 weeks</th>
<th>1-year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain</td>
<td>40%</td>
<td>58%</td>
<td>73%</td>
</tr>
<tr>
<td>RTW</td>
<td>75%</td>
<td>83%</td>
<td>90%</td>
</tr>
<tr>
<td>Complete*</td>
<td>39%</td>
<td>57%</td>
<td>72%</td>
</tr>
</tbody>
</table>

*median time to complete recovery: 59 days

Henschke et al.
After an Episode of Acute Low Back Pain, Recurrence Is Unpredictable and Not as Common as Previously Thought

Tasha R. Stanton, MScRS,* Nicholas Henschke, PhD,* Chris G. Maher, PhD,* Kathryn M. Refshauge, PhD,† Jane Latimer, PhD,* and James H. McAuley, PhD*†
LBP: Recurrence

1334 pts acute LBP

By 6 wks: 353 fully recovered

Recurrence (< 1-year) 24-33%

981: Not recovered

Stanton et al. Spine 2008;33:2923-8
LBP: Outcome Summary

• ~ 70% of patients recover fully
  – therefore ~ 30% don’t recover fully
    • Some risk factors identified but studies vary greatly in this aspect of prognosis
• Most improvement ≤ 3 months
• Recurrence is common
• So: LBP has the potential to be a chronic or frequently recurrent problem
Acute NP: Natural History
Natural Hx NP after MVC

Practice Point

– Acute LBP and NP have the potential to become a *chronic and/or recurring acute condition* that may need periodic maintenance and tune-ups
The Painful Spine: Treatment Acronym

- **Rehabilitation**
  - exercise as medicine
  - body mechanics training
- **Interventions**
  - diagnostic and therapeutic injections
- **Medical**
  - medications
  - cognitive-behavioral therapy
- **Surgery**
Acute LBP or NP: Treatment Options

- **Rehabilitation**
  - probably does not matter
    - nature and degree of injury significant
    - md recommendations very impt.
  - rest is harmful
  - activity good

- **Interventions**
- **Surgery**
- **Medications**

} Not indicated
Acute LBP or NP
Treatment Options

- Rehabilitation
- Interventions
- Surgery

- Medications
  - Acetaminophen (APAP)
  - NSAIDs
    - Corticosteroids?
  - Muscle relaxants (MR)
  - Opioids
APAP vs. NSAID: acute LBP

- NSAIDs more effective than placebo
  - More side effects
- NSAIDs equal to APAP
  - More side effects
  - No difference effectiveness among NSAIDs
  - Pts tend to diminish value of APAP

Pepjin et al Spine 2008;33:1766-74
Oral corticosteroids: Acute LBP and NP

- Evidence does not support use
  - Published studies have shown no efficacy!
- My experience is totally contrary to the published evidence
  - Prednisone 60 mg
  - Two week taper to 0
Muscle Relaxants: acute LBP

• No differences in efficacy
  – benzos vs other forms MR
  – Effectiveness is short-lived: <10 days
• MR + NSAID better than NSAID alone.
  • Naproxen + cyclobenzaprine > naproxen
  • Analgesic + tizanindine > analgesic

VanTulder, et al., Cochrane Database Systematic Review, 2004
Muscle Relaxants: acute LBP

Digression: “spasm and spasms”

• “spasm”
  – patient complains of spasms
  – no visible or palpable muscle tightness or spasm
  – probably just another descriptor of a painful sensation
• however, data somewhat supportive of short-term use
Choice of MR: acute LBP or NP

- More sedating
  - cyclobenzaprin, tizanidine
- Less sedating
  - metaxalone, methocarbamol
- Carisoprodol (Soma) has high risk for dependence/abuse
- For all MR
  - “It’s the refill”
Opioids: Acute LBP or NP

- Goal of early Rx: maintain function
- Opioid use
  - Moderate to severe pain + poor function
    - brief screen for hx addictive disease
    - combine with apap or nsaid MR
    - no automatic refills
    - re-assess in ~2 weeks
Chronic LBP
The Painful Spine: Treatment Acronym

• Rehabilitation
  – exercise as medicine
  – body mechanics training

• Interventions
  – diagnostic and therapeutic injections

• Medications
  – most data is for nonspecific CLBP

• Surgery
“At last, an exercise pill that really works”
Persistent Pain

- Neuropathic
- Nociceptive
- Mixed (Both)
- Neither

Neuropathic:
- Neurogenic
  - OPIOIDS

Nociceptive:
- Structural
  - ANTICONVULSANTS

Mixed (Both):
- ?
  - ANTIDEPRESSANTS

Neither:
- STOP

In many cases, may need to mix and match.
Long-term opioid analgesic therapy

“Nothing either good or bad, but thinking makes it so”

Shakespeare, W
Hamlet 1606; Act 2, scene 2
Opioid Analgesics for CLBP: Summary

• **Effectiveness**
  May require serial trials to find an individual pt’s “best opioid”…probably genetic
  – More effective than placebo in multiple RCTs
  • Reasonable expectation > 50% pain relief
  – Short-term data more robust than long-term
Opioid Analgesics for CLBP: Summary

• **Side effects**
  – Occur in most/all patients
    • Most improve with time
  – Usually readily manageable with other meds

• **Tolerance**
  – Rarely a clinical problem
  – Pseudo-tolerance more common
  – Increased meds due to increased pain due to:
    • disease progression
    • increased activity
Other Possible Downsides to Opioids

• Higher dose opioids predict poorer outcome in FRP
  – Pts on opioids did poorer than opioid-free
  – Higher drop-out rate (pts req. to taper to zero)
  – More long-term disability, costs, fewer RTW

  Kidner et al. JBJS 2009;91:919-27

• Withdrawal of opioids can improve outcomes in FRP
  – 196 pts in 3-week FRP with opioid withdrawal
  • Pts showed signif clinical improvements in function

  Crisostomo R et al. Am J PMR 2008;87:527-36
Consider Opioid Analgesic *Trial*

- Patients you know well
- Moderate to severe pain
- Refractory to other treatments
  - adequate/reasonable functional restoration
  - other medications
- Significant structural or neuropathic pathology
  - pain and impairment consistent with structural pathology
  - not amenable to direct repair
Consider Opioid Analgesic Trial

• Psychologically reasonable
  – Person with chronic pain (adaptive coper)
  – Mild mood disorder?
  – Reasonable expectations
    • MD and patient

• No history of addictive disease
  – Unless in conjunction with addiction specialist
Continuation of Opioids

- Good response to therapeutic trial
  - ≥ 50% reduction in pain (+/- if ≥ 30%)
  - NRS reduced ≥ 3
  - No aberrant drug-related behaviors
  - Tolerable side effects
- Long-acting or continuous release forms
  - Short-acting rescue doses for
    - breakthrough pain
    - expectant pain
In the process of degeneration

From this healthy

To This degenerated
Potential Sources of *Chronic* LBP

• Disc
  – Discogenic pain
  – Disc herniation
    • especially midline
Lumbar Disc: “The Weakest Link”

Two Components

Anulus

Nucleus
Nucleus

• Avascular
• Not innervated
• Load bearing and dispersion
• Stabilization of motion segment with anulus
Lumbar Anulus Fibrosus

Richly Innervated

- Normal: outer 1/3
- Degenerated: Deep ingrowth of nociceptors

Freemont A. Lancet 1997;350:178
Coppes M. Spine 1997;22:2342
Painful Disc

**Diagnosis:**
- Younger age

**Mechanism of Injury**
- Flexion or torsion single injury
- Excess sitting (cumulative trauma)
- Often none identified

B. Circumferential and radial tears of anulus fibrosus lead to nucleus pulposus herniation
Painful Disc: History

**Symptoms**

- Midline LBP
- +/- gluteal and leg pain
- Increased pain during
  - sitting
  - transition sit to stand
- Decreased pain with standing and walking

**Exam**

- Basically normal
- Except decreased ROM Neurologic wnl

Young S.  Spine Journal 2003;3:460
Discogenic Pain

- **Rehabilitation**
  - “working wounded”
- **Core strengthening**
  - Extensors > obliques > abds
- **Interventions**
  - not usually helpful
- **Medications**
  - opioid analgesics
- **Surgery**
  - discectomy and fusion
More Refractory Discogenic Pain: More Aggressive Rehabilitation

- Short functional restoration
  - 2-3 hours/day; 2-3 times per week
    - Mostly group
  - No psych
- Longer
  - 8 hours/day; 5 days per week
  - Other Rx: psych; occup counselling, etc.
  - Not readily available
Non-specific CLBP: *pain*

Slide courtesy of Jim Rainville, MD

### Pain 0-10

<table>
<thead>
<tr>
<th>Condition</th>
<th>Eval</th>
<th>Discharge</th>
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</thead>
<tbody>
<tr>
<td>CLBP (670)</td>
<td>6.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Failed backs (159)</td>
<td>7</td>
<td>4.6</td>
</tr>
</tbody>
</table>
Non-specific CLBP:  \textit{function}

Oswestry Disability Scores

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<tr>
<td>CLBP (670)</td>
<td>39</td>
<td>22</td>
</tr>
<tr>
<td>Failed Backs (159)</td>
<td>43</td>
<td>28</td>
</tr>
</tbody>
</table>

Slide courtesy of Jim Rainville, MD
Discogenic Pain

- **Rehabilitation**
- **Interventions**
  - not usually helpful
- **Medications**
  - opioid analgesics
- **Surgery**
  - discectomy and fusion
Discogenic Pain

• Mirza S, Deyo R. Spine 2007;32:816-23

Systematic review of 4 RCTs

– Surgery may be more efficacious than unstructured rehab but may not be more effective than structured ≥3 week cognitive-behavioral rehabilitation
Herniated Disc

Symptoms vary by:
Location, location, location:

• Lateral HNP: Nerve root compression
• Midline HNP: Low back pain
Disc Herniation

- **Axial LBP**
  - Treat as discogenic pain
- **Radicular Pain / Radiculopathy**
  - Rehabilitation:
    - same as discogenic pain
    - often with directional preference (McKenzie)
Disc Herniation

• Radicular Pain / Radiculopathy
  – Rehabilitation:
  – Interventions
    • epidural corticosteroids often helpful
      – Riew D.
  – Medications: not usually that helpful except in very-short term
    • corticosteroids
    • opioid analgesics
    • ? Anticonvulsants
    • ? Antidepressants
Disc Herniation Rx: surgery vs. med/rehab

• Axial LBP
  – Treat as discogenic pain
• Radicular pain
  – Surgery versus intensive rehab/meds/injection
HNP: Surgery

- Primarily Leg Pain
  - Discectomy

Weinstein J (SPORT) Spine 2008;33:2889
Thomas K. Spine 2007;32:1414
Gibson J. Spine 2007;32:1735
Potential Sources of *Chronic* LBP

- Discs
  - Discogenic pain
  - HNP
- Facet joint
- SI joint
- Spinal stenosis
Facet Joint (FJ) Pain

- **Prevalence**
  - 15 to 30% of CLBP

- **Mechanism**
  - Mechanical ± inflammatory
  - Degenerative cascade

  - Disc degeneration does NOT need to precede facet changes

Facet Joint

Poor Correlation:
- history
- examination
- x-ray
- CT, MRI

There is no “facet syndrome”

Laslett M et al. BMC Muscul Disorders 2004;5:43
Facet Joint Pain

Possible clues (anecdotal):
• Rarely midline LBP only
• Standing and walking worse than sitting
• Standing pain improved by flexion
• Job/sports with extreme extension
• Tenderness just off midline
• Not tender over spinous processes
Facet Joints in Motion

Vertebral Body

Disc

Flexion (Bending Forward)  Extension (Bending Backward)

From Bridwell K. Spineuniverse.com
Facet Joint Pain

Diagnosis

• medial branch block with local anesthetic
  – One vs. two
• intra-articular not as reliable

Cohen, Anesthesiology, 2009
Facet Joint Pain: Treatment

- **Rehabilitation**
  - exercise with flexion bias

- **Interventions**
  - radiofrequency neurotomy

- **Medications**
  - not specific

- **Surgery**
  - not indicated
Facet Joint: Treatment

- Medial Branch Radiofrequency Neurotomy
  - RCT: significantly better than placebo
  - 9 to 12 (?) months relief
  - repeat as needed ?...

Dreyfuss Spine 2000;25:1270-1277
Lumbar RFN for facet pain

- Retrospective review multiple RFN
- Goals
  - Duration of relief
  - Stable vs changes
  - % of patients who get relief each time
### Duration of Relief *

<table>
<thead>
<tr>
<th>RFN Type</th>
<th>Duration</th>
</tr>
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<tbody>
<tr>
<td>Initial RFN</td>
<td>10.5 months (4-19)</td>
</tr>
<tr>
<td>Second RFN</td>
<td>11.6 (6-19)</td>
</tr>
<tr>
<td>Third RFN</td>
<td>11.2 (5-23)</td>
</tr>
<tr>
<td>Fourth RFN</td>
<td>9 (5-14)</td>
</tr>
</tbody>
</table>

* Measured from one RFN to the next RFN
# Success Rates: Repeat RFN

<table>
<thead>
<tr>
<th></th>
<th>RFN # 2</th>
<th>RFN # 3</th>
<th>RFN # 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success</td>
<td>17/20 (85%)</td>
<td>11/12 (92%)</td>
<td>7/8 (88%)</td>
</tr>
<tr>
<td>Failure</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Continuing</td>
<td>1*</td>
<td>6 *</td>
<td>3 *</td>
</tr>
</tbody>
</table>

* Remains successful to date; considered success
Potential Sources of *Chronic* LBP

- Discs
  - Discogenic pain
  - HNP
- Facet joints
- Sacroiliac joint
Potential Sources of *Chronic* LBP

- Sacroiliac joint

15 to 30% of CLBP

Sacroiliac Joint “Dysfunction”

- Poor correlation with
  - history
  - exam
  - CT, x-rays

- Diagnosis made by:
  - SIJ injection

SI Joint Pain

- Pain distal to PSIC
- “Radicular syndrome” without MRI or exam evidence of root compression
- Groin pain
- Trauma to region: fall, MVC, etc
  
- Prior lumbar fusion to sacrum
  
SI Joint: Examination

Not definitive, just suggestive

- Patient points to the SIJ
- Provocative tests
  - Direct tenderness (x-ray with bb)
  - Gaenslen
  - FABER
  - Trendelenberg
Sacroiliac Joint Pain: Treatment

• Rehabilitation
  – Gluteal muscle group

• Interventions
  – serial corticosteroid injections
  – radiofrequency neurotomy
SIJ: Treatment

• Serial injections...
Results

• Two patterns of response
  – 91 (76%): 1-3 SIJ injections
  • 40 required only 1 injection
  – 26 (24%): ≥ 4 SIJ
  – (3 SIJ fusion)

• Wide variation in duration of response
Sacroiliac Joint Pain: Treatment

- Rehabilitation
- Interventions
- Medications
  - not specific
- Surgery
  - SIJ fusion
    - Severely impaired
    - Definite diagnosis
Sacroiliac Joint Pain

- Strength training
- Stretching
- Self mobilization
- Serial injections
- Very rarely, SI joint fusion

Neck Pain
Chronic Axial Neck Pain: Most Common Structural Causes

• Facet Joints
• Discs
• Postural (muscle?)
  – Usually secondary
    • poor posture/ergonomics
    • “guarding” underlying
• Shoulder
  – referred
Cervical Pain: not specific Rx

- Rehabilitation
- Interventions
  - Epidurals very overused
    - Rarely helpful for axial pain
    - Must be something significant in canal
      - Disc herniation
      - Spinal stenosis
- Medications
- Surgery
Facet Joint Pain

• A very common cause of chronic refractory neck pain
• Readily treatable

Barnsley L. Spine 1995;20:20-26
Facet Joint Referral Patterns
(Dwyer. Spine 1990)
Facet Joint Pain

Correlation with history not well established

• Axial neck pain
  – Often 1/2 inch from midline
  – Often mistaken for myofascial pain

• Pain referred to head, trapezius, interscapular regions …
Facet Joint Pain: diagnosis

• Medial Branch Blocks
  – Local anesthetic
  – Greater than 50% relief
  – Two separate occasions

• +/- intra-articular steroids
  – ?? confirmatory
Cervical Facet Joint Pain: Treatment

- Rehabilitation
  - exercise
- Interventions
  - radiofrequency neurotomy
- Medications
  - not specific
- Surgery
  - not indicated
Facet Joints: Rx

- Radiofrequency neurotomy
  - very effective in well chosen patients
  - many patients flare 1 to 2 weeks
  - relief lasts 8 to 12 months
    - repeats equally effective

- Lord SM. NEJM 1996;335:1721-1726
Chronic Axial Neck Pain: Most Common Structural Causes

- Facet Joints
- Discs
  - Postural (muscle?)
    - Usually secondary
      - poor posture/ergonomics
      - “guarding” underlying
  - Shoulder
    - referred
Discogenic Pain

- Painful “degenerated disc”
- Midline disc herniation
  - without nerve root compression
  - without spinal cord compression
- Correlation with history not well established
- Pain can be referred to head, trapezius, interscapular regions
Disc versus Facet Referral Patterns

C4/5

C5/6
Cervical Discogenic Pain

- Rehabilitation
  - useful but not specific
- Interventions
  - not usually helpful
- Medications
  - not specific
- Surgery
  - discectomy and fusion
ACDF for Axial Neck Pain

- Garvey T et al. Spine 2002;27:1887-95
  - 87 pts f/u
    - 82% good/very good/excellent
      - F/U: 4.4 years
    - VAS: 8.4 to 3.8
    - Fnx increased 50% (OSI, RM)
ACDF for Axial Neck Pain

- Pallit M et al. Spine 1999;24:2224-28
- 38 pts with axial NP...
  - mean f/u 53 months
  - 79% satisfied
  - NRS: 8.3 to 4.1
  - OSI: 58 to 39
Failed Back Surgery

Schofferman J. Failed Back Surgery.
December, 2009
FBSS: Definition

The final outcome of surgery did not meet the expectations that were established before surgery by both patient and surgeon.
Failed Back Surgery Syndrome

- Non-specific term
- Lumps together many “problems”
  - Structural pathology
  - Extra-spinal pathology
  - Neuropathic pain
  - Psychological disorders
FBSS: Structural Etiologies

- Burton et al
- Waguespack et al
  Pain Medicine 2002;3:18-22
- Slipman et al
  Pain Medicine 2002;3:200-214

In all studies, a diagnosis was established in 95% of patients.
## Comparative Data

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Burton %</th>
<th>Waguespack %</th>
<th>Slipman %</th>
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</thead>
<tbody>
<tr>
<td>Lateral stenosis (foraminal)</td>
<td>58</td>
<td>29</td>
<td>25</td>
</tr>
<tr>
<td>Disc herniation</td>
<td>12-16</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Painful disc(s)</td>
<td>20</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Neuropathic</td>
<td>6-16</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
FBSS: Most Common Causes

- Spinal Stenosis
  - Foraminal
- Discogenic Pain
  - Disc herniation
- Neuropathic Pain
- Facet joint (FJ)
- Sacroiliac joint (SIJ)
- Extra-spinal disorders
Painful Disc

**Location**
- At level of prior surgery
- At adjacent segment

**Development**
- Present prior to surgery
  - Not recognized as pain generator and therefore not included in surgery
  - Multiple bad levels, but only one fused
- Occurred after surgery
Chronic Leg Pain and the Spine

Differential Diagnosis

- Neuropathic pain
  - Prolonged compression
    - Foraminal stenosis
- Neurogenic pain
  - Ongoing compression
    - Foraminal stenosis
- Mixed (both)
- Neither (hip, GTPS, etc.)
Neuropathic Pain

Injury or physiologic dysfunction of the peripheral or CNS
(permanent ?)
Potential Sources of Chronic Leg Pain

• Nerve Root Compression
  – HNP (lateral)
  – Lateral canal stenosis
Spinal Stenosis

Two Types

• Central canal
• Lateral canal
Spinal Stenosis: lateral canal
Spinal Stenosis: Leg Pain

- Pain increases with standing, squats or bends for relief
- Walking Intolerance
  neurogenic claudication
- Sitting usually relieves leg pain
Neuropathic Pain

• Potential mechanisms
  – Prolonged compression before surgery
  – Injury during surgery
  – Arachnoiditis
  – Peripheral nerve injury
    • Meralgia paresthetica
    • Cluneal nerve injury at iliac crest donor site
Neuropathic Axial LBP:  
Thinking Outside of the Box  

“Physiologic dysfunction of the CNS”  

• Central sensitization  
• Prolonged “bombardment”  
  – Dorsal horn and brainstem  
• Result: axial CLBP despite perfect surgery and no structural explanation for pain
Persistent Pain

- Neuropathic
- Nociceptive
- "Neurogenic"
- Structural
- Mixed (Both)
- Neither

ANTICONVULSANTS

- Gabapentin
- Pregabalin
- Topiramate

STOP
Persistent Pain

- Neuropathic
  - "Neurogenic"
  - Structural

- Nociceptive

- Both (Mixed)

- Neither
  - STOP

Antidepressants

- Nortriptyline
- Doxepin
- Duloxetine
FBSS: Neuropathic pain: treatments

• Spinal cord stimulation ± medications
  – RCT: meds vs meds + SCS
    • Combo: 48% had >50% decrease pain
    • Meds only: 9%
FBSS:
Establishing the Differential Diagnosis

- History
- Physical Examination
- Radiological studies
- Confirmatory diagnostic injections
FBSS: History

• Location of Pain
  – *Leg pain* >> *LBP*
    • Foraminal stenosis
    • Residual / recurrent disc herniation
    • Neuropathic pain
    • Mixed pain syndrome
      – (neuropathic + nociceptive)
  – *LBP* >> *leg pain*…
FBSS:  History

• Location of Pain
  – Leg pain >> LBP
  – LBP >> leg pain
  • Discogenic
  • Facet joint
  • SIJ
  • Instability (spondylolisthesis)
FBSS: History:: Response to Biomechanics

• **Sitting (flexion)**
  – Improves Pain
    – Spinal stenosis (leg or LB)
    – ? Facet joint (LB)
  – Worsens Pain
    • Disc pain
    • SIJ pain

• *Transition sit to stand…*
FBSS: History:: Response to Biomechanics

- **Sitting (flexion)**
- **Transition sit to stand**
  - Worse:
    - Disc
    - SIJ
  - No Change
    - Facets
Radiology

- MRI and/or CT
- Plain x-rays
  - Standing
  - Flexion and extension
FBSS and CLBP: treatments

- Nonspecific treatments
  - Rehabilitation
  - Medications
- Specific
  - Discogenic pain
  - Facet joint pain
  - SIJ pain
  - Spinal stenosis
  - Neuropathic pain
  - Psychological Illness
FBSS: Treatment:: Rehabilitation

- Usually first line of treatment
- Wide variety of rehab reported (mixed pts)
  - duration:
    - twice weekly, six weeks
    - Five days per week; six weeks
    - 25 hours per week; three weeks
  - In patients with FBSS
Chronic Low Back Pain (CLBP): pain

Slide courtesy of Jim Rainville, MD

Back Pain

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Eval: 3.6
Discharge: 4.6
Chronic Low Back Pain: function

Slide courtesy of Jim Rainville, MD

Oswestry Disability Scores

- CLBP (670): Eval 39, Discharge 22
- Failed Backs (159): Eval 43, Discharge 28
FBSS and CLBP: Summary

• FBSS and CLBP share most diagnoses
  – Diagnosis can be established >95% pts
• History is most important
  – Exam, imaging, injections are confirmatory
• Treatment is most effective when specific
  – Rehab and medications are not specific but are often effective
• Best care of CLBP pts often requires several specialists